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Remarks

Claims 1, 6, 7 and 15 have been amended for clarification purposes and no new matter has been added. Claims 2-5, 8-14 and 16-18 have been canceled for speed of prosecution, but the Applicants reserve the right to reintroduce these claims in this or a continuation application. Claim 19 has been newly added. Thus, claims 1, 6, 7, 15 and 19 are pending in the application. For at least the reasons stated below, Applicants assert that the pending claims are now in condition for allowance.

1.   Applicants' Invention

New tools are needed to deliver the oft heard but never realized promise of making the Internet as easy to watch as TV. As the Internet has grown in popularity and function, multimedia content providers have struggled to connect with their growing potential Internet audience. Unfortunately, although the Internet's ability to distribute and the Web surfer's ability to receive high bandwidth content has grown exponentially since the mid-1990's, the tools developed by the Internet industry to connect content providers with their audience, in particular, the addressing systems use to locate and access that content, have not kept pace.

By contrast to television, radio and other entertainment media that use easy to remember channel and station names and numbers to source their programming, the Internet continues to use hard to remember URL addressing, such as: http://www.domainname.com/path/filename.html. To overcome the need to remember complicated URLs, browsers now include a "favorites list". Unfortunately, this feature falls victim to its own success. As more and more favorites are added, the longer that list

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becomes and the more difficult it is to find a particular Web page within the ever-growing list.

As individually maintained favorites lists proved less and less useful, Web portals began to appear. Web site owners, seeking to capitalize on the increasing popularity of the Web, hoped to attract advertising dollars or subscription fees by creating massive "favorites lists" organized by areas of interest. Portals often include only URL links and no discussion or description of the content reached by clicking those links, that makes clicking each link an act of blind faith.

Another approach for assisting users to find their desired online content is the use of search engines. Visitors to a search engine Web page are required to formulate and enter words and/or phrases to attempt to locate the content they seek. All too often, many of the links returned from a search engine have little or no value to the searcher. The descriptions accompanying the links too frequently provide insufficient information to determine the link's worth.

The Internet certainly has the potential to rival television and radio as an entertainment distribution medium offering thousands, not hundreds, of programs. Further, the Internet as a unicast system easily provides on-demand programming that television continues to struggle to offer. Unfortunately, finding the content has never been easy enough for the user.

The present invention creates an entirely new paradigm for organizing Internet content and making that content readily available to its intended audience. In one embodiment, the invention divides Internet content (such as Web pages, stand alone multimedia content, etc) into a number of different genres. These Genres currently include,

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but are not limited to, Animation, Music Videos, Internet Radio, Sports, and Comedy.   In

one embodiment, each genre is identified by a two character text code: Animation = "AN",

Music Videos = "MV", Internet Radio = "IR", Sports = "SP" and Comedy = "CM".

A "channel code" in the present invention is a textual genre code followed by a

number. In one embodiment, the number includes four digits. For example, within the

Comedy genre there may exist channels CM0001, CM0050, CM0125, CM3820, etc.

Each web item that is categorized for use by the present invention is assigned to its

proper genre and is given a unique number so that the content has its own channel code.

The invention also includes (in one embodiment) a bridge that better connects the

information in the database of channel codes and information about the content to the

channels' intended audiences.

In the Television Industry, a set-top box may be used to create a time-based on-

screen program guide as such a bridge for television viewers. Such a guide allows each

user to identify and access individual programs. The present invention provides access to

multimedia content without a set-top box. Software on the user's personal computer

provides a virtual remote control that is independent of the other software being run by the

user. For example, the virtual remote control is not part of the Internet Browser, MP3

application, Internet Radio application, etc.

In one embodiment, the virtual remote control allows the user to access data quickly

by pressing a button corresponding to a genre code (such as the "CM" button) and then

pressing the digits that make up the number portion of the channel code. For example, the

user might press "CM1500" to have the invention's database retrieve the access information

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(such as a URL) for the associated content. Then the invention chooses the proper software application and instructs it to retrieve the content.

For example, if the user knows that the Channel Code for the New York Yankees baseball team's home page is SP0120, the user presses the "SP" button for the "SP" genre code and then presses the 0-1-2-0 buttons on the virtual remote's number pad and finally presses the "GO" button. This causes the virtual remote control to display "SP0120" in its display, compare that Channel code with the stored data about that channel and then displays the Channel (Web page), assigned to Channel Code "SP0120" in the user's copy of Internet Explorer or other Web client software.

Alternatively, after first selecting a Genre, the user can "surf" through every Channel in that Genre using the remote's up and down arrow buttons to scan the channels. Using the up arrow displays the next available Channel in the current Genre in ascending numerical order; the down arrow displays the next Channel in descending numerical order. If a Channel Number has not been assigned in the current Genre to valid content, the arrow buttons will skip that Channel Number until a valid Channel Code is reached.

To summarize, the invention replaces the complex DNS and URL addressing schemes with easily recognizable Channel Codes, and introduces a centralized database and client-side software that eliminates the problems inherent in favorites lists, portals, and search engines that have prevented the Internet from reaching its potential as an entertainment distribution medium. The features of the various embodiments just explained are not found in the cited prior art. Rather, each of the prior art documents teach a system that contains the problems which are overcome by the present invention.

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2.   35 U.S.C. § 103 Rejections

The Examiner rejected claims 1, 3, 4, 7-11 and 16 under 35 U.S.C. § 103(a) as

being unpatentable over Kunkel et al. (5,961,603) in view of Kanungo (US 2003/0056215),

and claims 2, 17 and 18 as unpatentable over Kunkel and Kanungo in view of Coffee et al.

(6,115,680).

A.   Analysis of the Kunkel Reference

While Kunkel and the present invention respond to the same general problem (i.e.,

the difficulty users have finding and accessing the tremendous volume of information

available on the Internet), the solutions are so different as to be mutually exclusive. Kunkel

teaches "[a] system and method for accessing Internet-based and other information

through a user television in a television distribution network enables a user to access and

view information which is related to the programming content of a currently viewed

television broadcast." (Abstract 57).

The problem addressed by the Kunkel invention is that television and content on the

Internet "have not been combined with one another previously, and a need exists for a

system ... to provide television viewers with access to information from the Internet"

(column 1, lines 25 – 40). Kunkel's solution is to remove the personal computer from the

process of locating and accessing Internet data, and instead use television programming

and advertising as tools for directing viewers to only that Internet information that pertains

to the subject matter of those programs and ads.

Specifically, Kunkel teaches a system in which users are supplied with an enhanced

set top converter box and hardware remote control. As the user tunes into a particular

television program (or an advertisement is displayed on the user's television set), he/she

can press a channel hyperlink button on the hardware remote control to display Internet content related to that program or advertisement (the "current program").

Although Kunkel teaches the use of a content database that contains data pertaining to Web pages, by contrast to the present invention's system for organizing content by Genre, Kunkel's technology is narrowly directed towards making television programming the defining factor in accessing Internet data and content.

The present invention uses a series of Genres-qualified channel codes to assign potentially thousands of content items to those Genres to allow personal computer users to quickly locate and view content. By contrast, Kunkel assigns Web pages to television programming and advertisements, and allows each user to access Web content only if and when the user can view the television program or advertisement associated with that Web page. Kunkel, by using a multicast distribution system like television, requires users to give up the Internet's on-demand ability.

In summary, Kunkel teaches how to use television with a set-top box and a physical remote control device while tossing out any need for a personal computer. The Kunkel invention has its users watch television and press a hyperlink button when the user wants to view Web content somehow associated with the television program or advertisement being broadcast. Kunkel does not describe or even suggest a system that allows users to enter a Channel Code consisting of a Genre code and a numerical code to access the desired Web content 24 hours a day, seven days a week using only their personal computers. Nor does Kunkel describe a guide, written or electronic, in which (1) each Web page included in the content database is identified by its unique Channel Code.

B.   Analysis of the Kanungo Reference

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While Kunkel et al. seeks to use television to organize Web pages, Kanungo strives towards almost the opposite goal, using Web pages to organize television and other video content. Kanungo does not concern itself with organizing Internet or other computer network content. Rather Kanungo is directed at providing a more flexible alternative to the traditional hardware remote controls used to operate television sets and VCR players by creating a system that "allows the user to control the display of video data (sent from a television or other video source) via a 'virtual remote control' displayed on a World Wide Web page being viewed by the user". (Paragraph 0010 of page 1).

Kanungo requires two essential elements. First, it requires a Web page that contains an "applet". While not defined in the Kanungo Patent Application Publication, the term applet is used in accord with common Internet parlance, which defines that term as: "A program designed to be executed from within another application. Unlike an application, applets cannot be executed directly from the operating system." (see, www.webopedia.com/TERM/A/applet.html). Second, it requires a data processing system set top box connected to a video display which contains a "virtual machine" specifically designed to run the applet, communicate with a video source and cause the attached video device to display the Web page including the virtual remote control and one or more Picture in Picture (PIP) displays containing the selected video and other content. As noted in paragraph 0012, PIP is not used in its usual sense of a video picture display within a larger video picture on some television screens, but rather to define an independent window contained within the Web page comparable to "framed" Web pages that are divided into two or more windows that display and change content independently of the page as a whole.

According to paragraph 0035 of the reference, such a data processing system set top box is "any data processing system that <u>does not allow the user to have access or control of</u>

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its operating system or that does not allow the user to warm boot the system at certain

times." This indicates that Kanungo explicitly excludes a personal computer from being

such a data processing system.

Kanungo explains that when the set top box is turned on, it downloads a pre-

determined Web page with the embedded applet. The virtual remote control that the applet

creates displays five types of control buttons: An On/Off button (312), a TV/Video selector

button (314), a Broadcast/Cable selector button (316), a Size button (318), and one or

more Channel Indicator buttons.

While the Fig. 3 drawings contain references to Channel 001 and Channel 002, the

Kanungo Patent Application Publication does not describe any system, Genre based or

otherwise, for identifying all the different video data to be controlled by the virtual remote

control. For example, if the invention is intended to access, in addition to television

channels, a number of videotapes, no explanation is provided how the user would identify

individual videotapes to the virtual remote control for viewing in the Web page's video PIP.

The present invention addresses very different problems than those identified in

Kanungo. Kanungo wants to organize television and other video data. Towards that end,

Kanungo describes a single Web page using a set top device that is explicitly not a personal

computer, and which starts up an embedded applet within a browser that displays video

content in one window of the Web page and a virtual remote control used to change that

content in a second window.

The present invention seeks to create a new system that simplifies access to the

Internet or other computer network using a personal computer connected to that network

running the invention's software application. The technologies and systems described and suggested in Kanungo are ill suited towards that goal. Kanungo specifically requires an applet embedded in a Web page. Applet technology, most often implemented using the Java applet programming tools identified in Kanungo's described embodiment, is a powerful but extremely limited technology. Internet standards require that applets be prevented from reading data from or writing data to the user's hard drive on his/her personal computer. Further, applets are typically restricted to accessing server data only on the same server that hosts the Web page distributing the applet. Finally applet technology is typically tied to the Web page containing that applet. For security reasons, when the browser closes a Web page, it terminates the applets running within that page.

The present invention, unlike Kanungo, embraces the personal computer, and eschews applet technology in favor of a stand-alone software application that can run outside of a Web page with full access to the user's personal computer and remote databases. The present invention, as described in Claim 1, creates a stand alone application that, contrary to the Kanungo applet, is executed from the operating system of the user's personal computer connected to a network of computers providing access to the Web pages and other data. The present invention (unlike an Applet) can be obtained from an ftp server, CD-ROM or other distribution medium independently of any Web page. The present invention (unlike Kanungo's invention) creates an on screen virtual remote control that exists independently of the user's browser and of any Web page. The on screen remote is designed specifically to accept input in the form of the Genre specific codes.

C.   Application of the Kunkel and Kanungo References to Claim 1

As amended, claim 1 states that one aspect of the invention is (with each element labeled for discussion purposes only):

A system for organizing and accessing content over a network of computers, the system comprising:

(a)   a database system connected to the network that contains a mapping of a plurality of channel codes to a plurality of network addresses and a plurality of content descriptions, where each channel code comprises a textual genre code and a number, and where each network address identifies a unit of content;

(b)   a content provider interface to the database system that is connected to the network, for allowing content providers to enter the network addresses and the content descriptions into the database system for the units of content;

(c)   a personal computer connected to the network, for use by a computer user to view the units of content over the network; and

(d)   a viewer interface software that is loaded on the personal computer, the viewer interface comprising a guide and a browser-independent virtual remote control;

(e)   wherein the guide shows the content descriptions for units of content and allows a viewer to select one of the channels for viewing in a network browser application running on the personal computer;

(f)   wherein the personal computer displays the guide to the computer user independently from the network browser application;

(g)   wherein the virtual remote control allows the computer user to display the units of content through the network browser application by inputting a textual genre code and a number or by selecting a textual genre code and then scanning channels by browsing through the channel codes for that genre code;

(h)   wherein scanning channels by browsing through the channel codes for a genre code comprises cycling only through the channel codes for which units of content are accessible;

(i)   wherein the channel code is not a URL.

The Patent Examiner asserts that in claim 1, Kunkel teaches elements (a), (b), (e) and that Kunkel does not teach elements (d) or (f). The Examiner asserts that Kanungo teaches elements (d) and (g). Due to the amendments, no assertions were made by the Examiner regarding elements (c), (f), (h) and (i).

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As to element (a) and (b), the Examiner points to Kunkel column 4, lines 40-55.
Here, Kunkel teaches the use of a database in which reference information about Internet
content is stored. The reference information "preferably includes source, content, timing
and duration information regarding each program or advertisement. In addition, a key
piece of information will typically be a Uniform Resource Located (URL)". Kunkel does not
teach element (a)'s requirement of "where each channel code comprises a textual
genre code and a number". Nor does it teach "allowing content providers to enter
the network addresses and the content descriptions into the database". Thus,
Kunkel fails to teach or suggest element (a) or (b).

As to element (c), (f), (h) and (i), the Examiner makes no assertions that the prior
art teaches these elements. Applicants point out that element (c) requires that the
presenting invention leverages a personal computer, something that is explicitly prohibited
by the Kanungo invention. Element (f) requires that the guide be presented to the
computer user independently from the network browser. Element (h) requires that if the
user enters a genre code, such as the code for comedies, then the user may use scan
through the comedy channels, but only those channels that have any content will be
available to the user (i.e., "cycling only through the channel codes for which units
of content are accessible"), which makes channel scanning easier and quicker since
'empty' channels are automatically skipped. Element (i) explicitly requires that "the
channel code is not a URL". Kunkel and Kanungo clearly do not teach the use of
channel codes like those of the present invention, where the channel codes include a textual
genre code and a number code, such as "CM0020".

As to element (d) and (g), the Examiner points to Kanungo figures 3a and 3b and
paragraph 0010 on page 1. In the two figures, Kanungo shows a webpage that includes

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content 304 and a virtual remote control 310. There is no teaching of a guide although

element (d) requires "the viewer interface comprising a guide". As the Kanungo's

version of a virtual remote control is "displayed on a world wide web page being viewed by

the user" (paragraph 0010 and see figures 3a and 3b), it teaches away from "a

browser-independent virtual remote control" as required in element (d). Element 320

of the cited figures show an area in the virtual remote control that states "Channel 002".

This does not teach the novel aspect of categorizing channels into genres and including a

textual reference to the genre as the first part of the channel code, such as "CM0030", as

required in element (g)'s recitation of "inputting a textual genre code and a number".

The remote control of Kanungo contains no up and down buttons or genre buttons (or

similar feature) that are required in element (g)'s recitation of "selecting a textual

genre code and then browsing through the channel codes for that genre code".

Therefore, Kanungo does not teach elements (d) and (g).

As to element (f), the Examiner points to Kunkel column 4, lines 60-65. Here,

Kunkel teaches that the related information may be multimedia and from "any source,

[although] it is preferable that at least some of the information be obtained from the

Internet." There is no teaching or inference here about a "guide shows the content

descriptions for units of content and allows a viewer to select one of the

channels for viewing in a network browser application running on the personal

computer". Thus, Kunkel fails to teach element (f).

As these shortcomings of the references show, Kunkel and Kanungo do not (alone or

in combination) teach each and every element of claim 1 and therefore Applicants request

that rejection be withdrawn.

     D.   Application of Kunkel and Kanungo to Claim 7

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The above discussion refutes Examiner's rejection to claim 1 and requests that claim

1 be allowed. Since claim 7 depends on claim 1, it includes all of the limitations from claim

1 and so is likewise allowable. That being said, Examiner's individual rejection of claim 7

will now be discussed.

"7.   The system for <u>organizing and</u> accessing content from claim 1, wherein the

Internet Domain Name System is not accessed in providing the <u>computer</u> user

with units of content."

3.   35 U.S.C. § 102 Rejections

The Examiner rejected claims 6, 12, 13 and 15 under 35 U.S.C. § 102(e) as being

unpatentable over Kanungo (US 2003/0056215), and claim 14 as being unpatentable over

Dunn (5,945,987).

A.   Application of Kanungo to Claim 6

The above discussion refutes Examiner's rejection to claim 1 and requests that claim

1 be allowed. Since claim 6 depends on claim 1, it includes all of the limitations from claim

1 and so is likewise allowable. That being said, Examiner's individual rejection of claim 6

will now be discussed.

The Examiner holds that Kanungo page 3, paragraph 0046 teaches the limitations of

claim 6, namely the browsing through the channels within a genre, but restricting that

browsing to channels that are designated as one of the user's favorite channels. Paragraph

0046 of Kanungo has no teaching about "favorites" of any kind. Rather, the paragraph

channel speaks about figure 2 illustrating buttons like "web", "mail", "home", and the like.

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The Examiner has not used Dunn (US 5,945,987A) as the basis for the rejection of claim 5, but relies on that reference to reject claim 14. Applicants point out that Dunn does include information about "favorites", however it is not used in the same context as that of claim 5.

Dunn creates a system for organizing on demand video into genres, much like genres used in video rental stores for the organization of the stores. Dunn uses an on-screen system that includes a hierarchical menu system to allow users to find and to identify a particular video by genre, actor, etc. Once the video is found, it can be ordered through the system. Dunn also allows users to add videos they locate to a single favorites list. Dunn's teaching of a "favorites list" is comparable to that found in web browsers - - it is a location for users to return in order to find 'bookmarks' to the previously identified favorite videos. Neither Kanungo nor Dunn teach the use of favorites such as a user may scan through channel codes by entering a genre and cycling through only channels that have available content and that "have been identified as one of the user's favorite channels." For these reasons, Applicants request that the rejection for claim 6 be withdrawn.

C.   Application of Kanungo to Claim 15

The above discussion refutes Examiner's rejection to claim 1 and requests that claim 1 be allowed. Since claim 15 depends on claim 1, it includes all of the limitations from claim 1 and so is likewise allowable.

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4.   Conclusion

Applicants submit that all pending claims are allowable over the art of record and

respectfully requests that a Notice of Allowance be Issued in this case. In the event a

telephone conversation would expedite the prosecution of this application, the Examiner

may reach the undersigned at 612-607-7508. If any fees are due in connection with the

filing of this paper, then the Commissioner is authorized to charge such fees (including fees

for any extension of time) to Deposit Account No. 50-1901 (Docket # 20118-13).

                    Respectfully submitted,

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